Too Much of a Sweet Thing: 
The Case for an Increased FDA Role in Reducing Sugar Consumption

Introduction

Prepare for a set of alarming statistics—95% of Americans will be overweight or obese by the year 2035, with one-third qualifying as diabetic by 2050. These predictions come from the documentary Fed Up (2014), which delves into the heedless state of sugar consumption in the United States. As highlighted in Figure 1, the past three decades witnessed skyrocketing rates of added sugar consumption in the average American’s diet. Although down from its 2004 peak, added sugar consumption in 2010 remained 19% higher for children and 32% higher for adults compared to 1977.

Figure 1. Increase in Added Sugar Consumption in the United States (The Obesity Society)

Claim

In order to combat this disconcerting trend in added sugar consumption, government health officials must take strong action to rid the American diet of added sugar’s empty calories.
First, the FDA should enact clear regulations requiring labeling for recommended daily allowances of added sugar. Qualified independent authorities such as the World Health Organization (WHO) and the American Heart Association (AHA) already publish such recommendations. Second, processed food packaging must include transparent labeling indicating all sources and quantities of added sugar. Third, due to the severe health hazards linked to excess sugar consumption, the FDA should issue a black box warning on all products containing significantly more than the recommended grams of added sugar. These measures will educate the American populace about the potentially fatal ramifications of their sugar intake. Aggressive action on the part of the FDA will also close the loopholes exploited by the food industry that allow companies to deliberately misrepresent added sugar content on current labels.

**Background Information**

Such assertive FDA regulation would bridge the considerable gap between recommendations from the scientific community and the hazardous reality of added sugar consumption in the United States. As indicated in Figure 2, a comparison of recommendations from official bodies such as the WHO and the AHA with current U.S. sugar consumption patterns reveals alarming disparities.

**Figure 2. WHO and AHA Sugar Intake Recommendations Versus the Reality in the U.S**

<table>
<thead>
<tr>
<th></th>
<th>World Health Organization (WHO)</th>
<th>American Heart Association (AHA)</th>
<th>Reality in the U.S.</th>
</tr>
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<tbody>
<tr>
<td><strong>Men</strong></td>
<td>150 calories</td>
<td>9 teaspoons</td>
<td>300 calories</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>100 calories</td>
<td>6 teaspoons</td>
<td>300 calories</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td>130-170 calories</td>
<td>9-10 teaspoons</td>
<td>329 calories</td>
</tr>
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The World Health Organization recommends that adults and children reduce their daily consumption of added sugars to between 5-10% of their total energy intake. As shown in the table above, this percentage roughly corresponds to 150 calories for men, 100 for women, and 130-170 for children. Yet, in 2010, adult Americans consumed up to 300 calories per day from added sugar, while children consumed 329 calories in the same year. Using another metric, the American Heart Association recommends limiting added sugars to six teaspoons per day for women and nine teaspoons for men, compared to the staggering nineteen teaspoons consumed each day by the average American. Underscoring this discrepancy, one 20 oz. bottle of Coca-Cola alone contains as many as 15 teaspoons of sugar, more than double the daily-recommended value for women (Center for Science in the Public Interest).

**Sugar-Related Health Hazards — Subsequent Disease Profiles**

The glaring disparity between the recommendations of official bodies and actual sugar consumption in the United States manifests itself in hazardous ways, the most extreme of which is the increasing prevalence and severity of medical conditions linked to excessive sugar intake. As added sugar consumption soared between 1977 and 2010, the number of diagnosed cases of diabetes and obesity rose at an even greater clip. Figure 3 illustrates that the number of diagnosed cases of diabetes grew threefold over the period 1980-2011. According to the CDC, obesity rates more than doubled during this same time frame.
Figure 3. Number (in Millions) of Civilian, Non-institutionalized Persons with Diagnosed Diabetes, United States, 1980–2011 (CDC)

As reported in the 2014 *National Diabetes Statistics Report*, total diagnosed and undiagnosed cases of diabetes in the U.S. reached 29.1 million in 2012, including a disquieting 26% of Americans over the age of 65. The growing incidence of obesity and diabetes begets a tremendous social cost, $245 billion in 2012, in direct medical expenditures and reduced productivity. These costs stem from complications associated with obesity and diabetes, including heart disease, stroke, neuropathy, kidney and eye damage, high blood cholesterol, poor wound healing, and amputation (CDC). If not controlled, individuals afflicted with these chronic conditions face years of onerous disease management, a range of ongoing health problems, and often-untimely death. In 2012, diabetes ranked as the seventh leading cause of death listed on U.S. death certificates. However, this ranking likely understates the reality, as physicians often list heart attacks or strokes related to diabetes as the ultimate cause of death (*National Diabetes Statistics Report, 2014*).

Addictive Properties of Added Sugar

The marked rise in sugar consumption and the growing prevalence of related diseases can be attributed to added sugar’s ubiquity and dangerously addictive properties. Studies show that
sugar can generate reward and craving impulses that rival those induced by addictive drugs. DiNicolantonio and Lucan outline sugar’s addictive profile in their article for The New York Times titled “Sugar Season. It’s Everywhere, and Addictive:”

Substance use disorders, defined by the Diagnostic and Statistical Manual of Mental Disorders, exist when at least two to three symptoms from a list of 11 are present. In animal models, sugar produces at least three symptoms consistent with substance abuse and dependence: cravings, tolerance and withdrawal. Other druglike properties of sugar include (but are not limited to) cross-sensitization, cross-tolerance, cross-dependence, reward, opioid effects and other neurochemical changes in the brain. In animal studies, animals experience sugar like a drug and can become sugar-addicted.

In a 2007 study, scientists offered forty-three laboratory rats the choice of intensely sweetened water or intravenous cocaine over the course of fifteen days. Echoing the crisis in American sugar consumption, a staggering 93% (40 out of 43) of the laboratory rats consistently chose sugar. Even the rats sensitized to cocaine opted for sugar (Fed Up). “At a neurological level, the neural substrates of sugar and sweet reward appear to be more robust than those of cocaine” (Ahmed, et al.). These properties of sugar are ideal for an industry that actively engineers products to be as addictive as possible.

**Food Industry’s Deceptive Labeling Tactics**

In order to market its addictive, sugar-laden products, the food industry relies on deceptive labeling tactics that mask the health risks of added sugar. Over 75 percent of packaged foods purchased in the United States incorporate added sugar (DiNicolantonio and Lucan). The supermarket labels for all of these items lack recommended daily percentages for sugar, only
including measurements in grams that carry no comparative meaning for the everyday American consumer.

**Misleading Language and Health Claims**

In place of visible information regarding sugar intake, the industry emphasizes misleading health claims that distract from the risks of added sugar. For example, as displayed in Figure 4, the front of a box of Kellogg’s Froot Loops declares that the contents constitute a “Good Source of FIBER” and are “Made with WHOLE GRAIN.” The name even loosely implies that the cereal consists of fruit, as further suggested by the proclamation of “NATURAL fruit flavors.” These deceptive health claims tend to be only marginally true, and misrepresent the nutritional value of the contents, particularly when it comes to added sugars.

**Figure 4. A Box of Kellogg’s Froot Loops**

*Alternative Names for Added Sugar*

The food industry’s deceptive tactics extend beyond the front of the box to the FDA mandated nutrition label on the back. The labeling treatment of high-fructose corn syrup illustrates this deception, emerging as what well-known nutritionist Marion Nestle refers to as a “flashpoint” for the widespread distrust of processed foods. Her comments, cited in a 2011
article for *The New York Times* titled “Is Sugar Toxic,” details the industry’s flip-flop approach towards high-fructose corn syrup (Taubes). When first introduced in the early 1980s, high-fructose corn syrup represented an industry solution to popular concern about the health risks of refined sugar. Portrayed as a “healthful” alternative, the sweetener gradually replaced most refined sugar in processed foods. Today, ironically, “the tide is rolling the other way,” as concerns about the toxicity of high-fructose corn syrup hold up refined sugar (sucrose) as the more natural substitute. In terms of disingenuous labeling tactics, product after product now showcases the proclamation: “no high-fructose corn syrup.”

From an overarching perspective, the food industry at present strategically disaggregates added sugar under many different names on nutrition labels. Figure 5 highlights just some of these alternative names for sugar used in food industry labeling, ranging from technical terms like “maltodextrin” to the natural sounding “agave nectar.”

**Figure 5. Alternative Names for Sugar Used in Food Industry Labeling (Harvard T. H. Chan School of Public Health)**

<table>
<thead>
<tr>
<th>Alternative Names for Sugar Used in Food Industry Labeling</th>
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<tbody>
<tr>
<td>Agave nectar</td>
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<tr>
<td>Honey</td>
</tr>
<tr>
<td>Brown rice syrup</td>
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<tr>
<td>Maple Syrup</td>
</tr>
<tr>
<td>High-fructose corn syrup</td>
</tr>
<tr>
<td>Dextrose</td>
</tr>
<tr>
<td>Evaporated cane juice</td>
</tr>
<tr>
<td>Maltodextrin</td>
</tr>
<tr>
<td>Glucose</td>
</tr>
<tr>
<td>Crystalline fructose</td>
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<tr>
<td>Sucrose</td>
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<tr>
<td>Lactose</td>
</tr>
<tr>
<td>Concentrated fruit juice</td>
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<tr>
<td>Invert sugar</td>
</tr>
<tr>
<td>Malt syrup</td>
</tr>
<tr>
<td>Molasses</td>
</tr>
<tr>
<td>Cane sugar</td>
</tr>
<tr>
<td>Brown sugar</td>
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This breakdown serves as a deception tactic. Food labels list ingredients in order of amount, with the first ingredient representing the largest quantity. By disaggregating added sugar into multiple,
often-unfamiliar names, companies get away with listing healthy sounding ingredients such as “whole grain corn” first. In this paradigm, added sugars fall lower on the list, where they remain undetected by consumers. Everyday Americans who read the ingredients on a box of cereal, for example, will not necessarily understand that corn syrup, dextrose, etc. all constitute added sugar.

**Barriers to Valid Information**

This underhanded approach on the part of the food industry renders food shopping in the U.S. a confounding process defined by significant barriers to valid nutrition information. Sugar appears in many products, for instance, where the average consumer would not expect or think to look for it. Figure 6 illustrates the profuse sources of added sugars in the typical American diet. Unsuspecting consumers do not realize that soda, energy, sports, and fruit drinks make up as much as 50% of their added sugar intake, while candy comprises a mere 6.1%.

*Figure 6. Sources of Added Sugars in the Average American Diet (Center for Science in the Public Interest)*
The field of nutrition represents one channel for addressing this dearth of helpful information. When I talked to Karen Moreno, MS, RD, CDN, resident dietician for a major medical practice in New York City, she emphasized the difficulty, even for informed patients, of navigating today’s supermarket aisles. While acknowledging the flaws in current food labels, Moreno still advises her patients to be vigilant and examine them carefully when shopping in order to glean as much information as possible about additives and nutrition. In terms of added sugar, she recommends that her clients familiarize themselves with some of the frequently used alternative names for sugar and take pains to steer clear of anything ending in “ose.” Moreno holds that we would benefit from avoiding processed foods altogether and sticking with fresh, homemade choices. She stresses that the nutrients present in natural foods blunt sugar’s deleterious effects.

However, while nutritionists can help guide food decisions, their fees put them out of reach for many individuals, creating another barrier to valid information. Health insurance plans will often not cover nutritionist services unless delivered in conjunction with a diagnosed medical condition. Given the food industry’s intentional distortion of nutrition information and the lack of viable alternative sources, the omission of sugar’s addictive capacities and health risks from the national discussion about preventative healthcare constitutes a glaring oversight on the part of regulatory officials and the medical community.

**Counterargument**

The FDA may cite this lack of a vociferous appeal from the scientific community—a call to expose both the evident dangers of added sugar and the food industry’s exploitative tactics—as reason for its inevitable reluctance to implement stronger regulation along the lines of my claim. The relative silence from doctors and scientists translates into a basis for inaction.
Influenced by political pressures originating in the food industry lobby, the FDA follows the path of least resistance by maintaining the status quo, and ostensibly wants to avoid the inevitable backlash that would come from exposing the food industry’s deceptions. Yet, in a bitter irony, the FDA’s negligence squanders enormous amounts of taxpayer and consumer money on preventable obesity and diabetes related health care each year. As the federal agency responsible for protecting and promoting the public health interests of the American people as they concern food, the FDA must perform its official duty by implementing much stricter regulation.

**Far-Reaching Conclusion**

Curtailment of sugar intake through stronger FDA regulation of food labels will have major repercussions, facilitating an overhaul of the hazardous present state of food consumption in the United States. Requiring recommended daily percentages for added sugar, listing all sources of added sugar and their quantity, and mandating black box warnings on products with significantly more than the recommended grams of sugar will render shopping for food a more transparent process. This transparency will empower Americans to be active consumers and make health-conscious choices for themselves and their families. Moreover, public awareness of these issues will reduce demand for products with extreme quantities of added sugar, thereby improving public health and lowering sugar-related medical expenditures.

On the other hand, if the FDA continues to evade such regulation and allows itself to be beholden to the interests of the food industry, the calamitous predictions made in *Fed Up* will almost certainly prove true. Alarmingly high rates of obesity, diabetes, and other health conditions will generate disastrous social and financial consequences, not to mention the human cost of skyrocketing early deaths. In our globalizing world, such health problems will
undoubtedly continue to be exported abroad along with the American processed food market, elevating the issue to one of global concern.

With such perilous future prospects in mind, the matter of excess added sugar consumption demands prompt action. As evidenced by the plight of the tobacco industry, low-cost government intervention can prove successful in curtailing abuse. With public education and the inclusion of black box warnings on tobacco products, smoking rates and tobacco’s adverse health impacts declined exponentially. Using the regulation of the tobacco industry as a model, the FDA must implement policies to curb excess added sugar intake, upholding the health of the American people as its primary objective.
Works Cited


